

AMENDED CLAIMS

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1.

A device for expanding into a cavity (16) in a borehole (2), said cavity (16) being at least partly defined by a casting material (10) disposed in the borehole (2), characterized by an annular element (6) disposed on a tubular element (1) in the borehole and
10 comprising an expandable material capable of extending from a retracted state to an expanded state.

2.

The device of claim 1, wherein the cavity (16) is at least partly defined by the borehole
15 (2) wall.

3.

The device of claim 1, wherein the cavity (16) is at least partly defined by the tubular
20 element (1).

4.

The device of any of claims 1 – 3, wherein the cavity (16) at least partly holds a fluid.

5.

The device of claims 1 and 4, wherein the annular element (6) is adapted to extend from
25 the retracted state to the expanded state as a reaction to exposure to a fluid in the cavity (16).

6.

The device of claim 1, wherein the casting material (10) comprises hardened concrete.
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7.

The device of claim 1, wherein the cavity (16) comprises an elongated channel substantially defined by the casting material (10), the tubular element (1) and the
35 borehole (2) wall.

8.

A method for providing a barrier in a cavity (16) in a borehole (2), said cavity (16) being at least partly defined by a casting material (10) disposed in the borehole (2), characterized by the steps of:

- 5 - on a tubular element (1), disposing one or more annular elements (6) comprising an expandable material capable of extending from a retracted state to an expanded state;
- extending the tubular element (1) into the borehole;
- providing a casting material (10) into a first volume (12) defined by a the borehole (2) wall and the outer surface of said tubular element (1);
10 whereby the expandable material may extend into said cavity (16).

9.

The method of claim 8, wherein the annular elements (6) comprise a plurality of elements placed at substantially regular intervals along a length of the tubular element
15 (1).

10.

The method of claim 8, wherein the expandable element (6) is adapted to extend from the retracted state to the expanded state as a reaction to exposure to a fluid in the cavity
20 (16).

11.

The method of claim 8, wherein the expandable material extends into the cavity (16) after the casting material (10) has hardened.
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12.

The method of claim 8, wherein the cavity (16) comprises an elongated channel substantially defined by the casting material (10) , the tubular element (1) and the borehole (2) wall.
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